That which is claimed is:

1. A method of identifying antibodies having binding affinity for an antigen, said method comprising:

(a) contacting an array of uncharacterized antibodies on a solid surface with at least one antigen; and

(b) identifying the antibodies to which the antigen binds.

2. A method according to claim 1 wherein the antigen is a protein.

3. A method according to claim 1 wherein the antigen is an intact cell.

4. A method according to claim 1 wherein the antigen is a cell lysate.

5. A method according to claim 2 wherein the protein is recombinant.

6. A method according to claim 5 wherein the protein is full-length.

7. A method according to claim 5 wherein the protein is a protein fragment.

8. A method according to claim 7 wherein the protein fragment is encoded by an EST fragment.

9. A method according to claim 1 wherein the antibodies are monoclonal antibodies.

10 A method according to claim 1 wherein the antibodies are polyclonal antibodies.

11. A method according to claim 1 wherein the antibodies are antibody fragments.

12. A method according to claim 11 wherein the antibody fragments are single chain antibodies.

13. A method according to claim 1 wherein the antibodies are recombinant antibodies.

14. A method according to claim 1 wherein the antigen is detectably labeled.

15. A method according to claim 14 wherein the detectable label is a fluorescent moiety, avidin, streptavidin, or biotin.

16. A method according to claim 1 wherein the antigen is a fusion protein comprised of an epitope tag or a fluorescent protein.

17. A method according to claim 1 wherein the binding affinity of said antibody for said antigen is determined by iterative washing of said solid surface with a suitable diluent and detecting when antigen is no longer released therefrom.

18. A method of comparing protein expression in two or more populations of cells, said method comprising:

(a) contacting an array of antibodies on a solid surface with a cell lysate of a first cell population, generating a first binding pattern;

(b) contacting a duplicate array of antibodies on a solid surface with a cell lysate of a second cell population, generating a second binding pattern; and

(c) comparing the binding pattern of the first cell lysate with the binding pattern of the second cell lysate.

19. A method according to claim 18 wherein the antibodies are uncharacterized antibodies.

20. A method according to claim 18 wherein the antibodies are recombinant antibodies.

21. A method according to claim 18 wherein the first cell lysate is derived from normal cells and the second cell lysate is derived from abnormal cells.

22. A method according to claim 21 wherein the abnormal cells are cancer cells.

23. A method according to claim 18 wherein the first cell lysate is derived from normal cells in a resting state and the second cell lysate is derived from normal cells in a stimulated state.

24. A method according to claim 18 wherein the difference between the first and second set of cells is the presence of a different detectable label.

25. A method for determining the effect of varying binding conditions on the binding affinity of antibodies to a specific antigen, said method comprising:

(a) contacting an array of antibodies on a solid surface with at least one antigen under a first set of binding conditions, generating a first binding pattern;

(b) contacting a duplicate array with the antigen under a second set of binding conditions, generating a second binding pattern;

(c) comparing the first and second binding patterns.

26. A method according to claim 21 wherein said varying binding conditions comprise varying pH, temperature, salt concentration, and/or duration.

27. A method for characterizing a cell, based on the pattern of protein expression produced thereby, said method comprising:

(a) contacting an array of antibodies on a solid surface with a cell lysate; and

(b) identifying the profile of antibodies to which components of the lysate binds.

28. A method of diagnosing a disorder, said method comprising:

(a) contacting an array of antibodies specific for one or more antigens characteristic of a disorder with a biological sample obtained from a subject under conditions suitable for the formation of an antigen:antibody complex, wherein the presence of the antigens in the biological sample would be indicative of the disorder; and

(b) detecting the formation of any antibody: antigen complexes.

29. A method according to claim 28 wherein the biological sample is cerebral spinal fluid, blood, plasma, urine, feces, saliva, tears, or extracted tissue.

30. A method according to claim 29 wherein the disorder is stroke, cerebral hemorrhage, myocardial infarction, peripheral blood clots, diabetes, cancer, Alzheimer's disease, and sepsis.

31. A kit comprising:

(a) an array of uncharacterized antibodies on a solid surface; and

(b) instructions for using the array.

32. A kit according to claim 31 wherein the instructions are for identifying antibodies to a specific antigen, comparing protein expression in two or more populations of cells, characterizing a cell based on the pattern of protein expression produced thereby, or determining the effect of varying binding conditions on the binding affinity of the antibodies.

33. A kit according to claim 31 wherein the antibodies are monoclonal antibodies, polyclonal antibodies or antibody fragments.

34. A kit according to claim 33 wherein the antibody fragments are single chain antibodies.

35. A kit according to claim 31 wherein the antibodies are recombinant antibodies.

36. A kit according to claim 31 further comprising reagents for detecting an antigen and instructions for use thereof.

37. A kit comprising:

(a) an array of antibodies on a solid surface; and

(b) instructions for using the array; wherein the instructions are for diagnosing a disorder, characterizing a cell based on the pattern of protein expression produced thereby, or comparing protein expression in two or more populations of cells.

38. A kit according to claim 37 further comprising reagents for detecting an antigen and instructions for use thereof.

39. A kit according to claim 37 wherein the antibodies are recombinant antibodies.

40. A kit according to claim 37 wherein the antibodies are single chain antibodies.

41. A method of comparing protein expression patterns, said method comprising:

(a) contacting a microarray of nucleic acid samples derived from different sources with one or more nucleic acid probes and

(b) identifying the sample or samples to which the probe(s) binds.

42. A method according to claim 41 wherein the microarray comprises nucleic acid samples derived from a single tissue type but from different species.

43. A method according to claim 41 wherein the microarray comprises nucleic acid samples derived from a single species but from different tissue types.

44. A method according to claim 41 wherein the microarray comprises nucleic acid samples derived from the same tissue type at different developmental stages.

45. A method according to claim 41 wherein the nucleic acid samples are comprised of mRNA or cDNA.

46. A method according to claim 41 wherein the probe is detectably labeled.

47. A method according to claim 46 wherein the detectable label is a fluorescent label.

48. A method according to claim 18 wherein the first and second cell lysates are derived from cells from a single tissue type but from different species.

49. A method according to claim 18 wherein the first and second cell lysates are derived from cells from a single species but from different tissue types.

50. A method according to claim 18 wherein the first and second cell lysates are derived from cells from the same tissue type at different developmental stages.